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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/016,661	10/29/2001	Remis Balaniuk	S00-226/US	3916

30869 7590 08/02/2007

LUMEN INTELLECTUAL PROPERTY SERVICES, INC.
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EXAMINER	
GEBRESILASSIE, KIBROM K	

ART UNIT	PAPER NUMBER
2128	

MAIL DATE	DELIVERY MODE
08/02/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/016,661	BALANIUK ET AL.	
	Examiner	Art Unit	
	Kibrom K. Gebresilassie	2128	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 April 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,5-12 and 21-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-12 and 21-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 April 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

conventional modeling applications in the situation illustrated have no mechanism for a user to be able to take readings of signal or internal block/model states synchronously.

However, with the remote auxiliary tool of the present invention in accordance with one embodiment, an event-listener API or equivalent tool is provided associating a tool with the graphical model 10 without being embedded in the graphical model 10. For example, if the user wishes to know the value of the signal at point A in the graphical model 10, the user implements the remote auxiliary tool of the present invention to initiate an observation event, or equivalent observation tool. The user registers with the model, using the event-listener API, a request to invoke an observer when point A in the graphical model 10 is computed by the source block of the signal of point A. As the model is executing, when the signal at point A is re-computed by the source block of the signal, an event is sent to the listener. The listener in this illustrative example is an observer that reads the value of the signal at point A and displays the value appropriately in a device, such as a graphical display scope. It should be noted that throughout this description the example embodiments make use of an API form of tool to connect the remote auxiliary tool to the model. However, one of ordinary skill in the art will appreciate that the remote auxiliary tool does not need to be implemented in the form of an API, but rather, can be implemented using a number of different tools, including library based modules, and other tools. As such, references to an API in the present description are intended to include APIs as well as such other equivalent tools noted above. In addition, an alternative example embodiment of the present invention makes use of an aggregation programming paradigm to achieve the non-intrusive and synchronized behavior of the remote auxiliary tool.

The remote auxiliary tool itself does not need to be represented graphically in the graphical model 10. However, because the remote auxiliary tool registers listeners with the model, the model can insert a graphical symbol or text, such as symbol 19, or other representation in the graphical model 10 showing the existence of the listener for the remote auxiliary tool. Such graphical representation can be, for example, shown in the block 11, similar to those illustrated in **FIGS. 2A** and **2B**, indicating the remote auxiliary tool is connected to the internal state of the block 11 and not the signal 13. More specifically, in the illustrative example showing the symbol 19, connections made by the

DETAILED ACTION

1. This communication is responsive to amended application filed on 04/27/2007.

2. Claims 1-3, 5-12, and 21-24 are pending.

3. Claims 4, 13-20, and 25-35 are canceled.

4. Claims 1, 5, 7, 10, and 21 are amended.

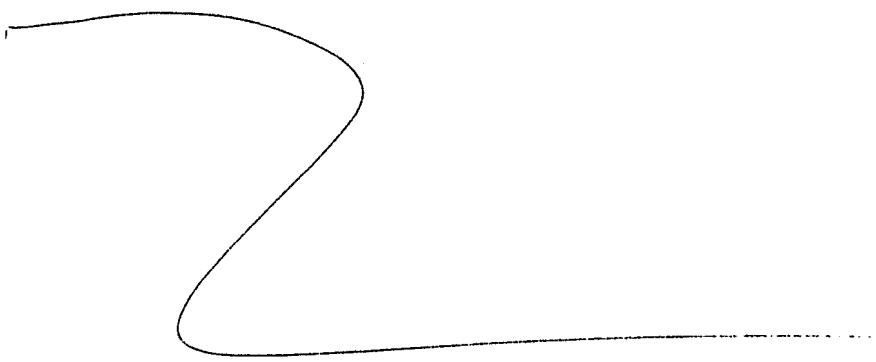
Response to Arguments

5. Response to Claim Objection: Applicants are amended claim 5, and 7 to overcome the objection and therefore the objection is withdrawn.

6. Response to 112(1) rejection: Examiner withdraws the rejection in view of the cancellation of claims 13-20, and 25-35.

7. Response to the Drawings Amendment: Examiner withdraws the objection in view of the cancellation of the amended drawing filed on 10/31/2006.

8. Response to Amendment to the specification: Examiner withdraws the objection in view of the cancellation of the amended specification filed on 10/31/2006.



9. Response to 101 rejection: Applicants are amended the claims to overcome the 101 rejection. However, amending the claimed invention is not fully resolve the 101 issue (**See: *Claim Rejections - 35 USC § 101*** below).

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

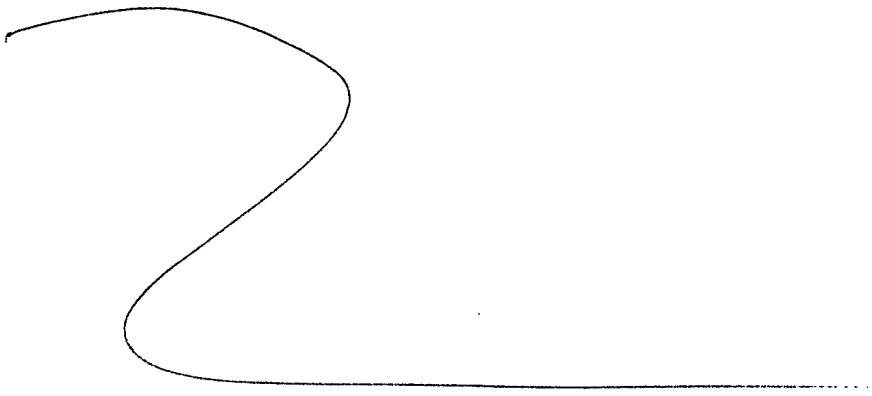
> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

a. For example, claim 1 recites:

> using the results of said configuring ~~to model~~ for modeling soft tissue simulation, surgical simulation, unrestricted multi-modal interactive simulation including simulating interactive topological changes, volumetric modeling for homogeneous or non-homogeneous materials, or graphic or haptic rendering.

It is unclear what is modeling. Is it modeling the "soft tissue" or the "simulation"?



Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

11. Claims 1-3, 5-12, and 21-24 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

For example, claim 1 recites:

> using the results of said configuring ~~to model~~ for modeling soft tissue simulation, surgical simulation, unrestricted multi-modal interactive simulation including simulating interactive topological changes, volumetric modeling for homogeneous or non-homogeneous materials, or graphic or haptic rendering.

The claimed invention would impermissibly cover every substantial practical application of, and thereby preempt all use of applications, and therefore the claimed invention is non-statutory.

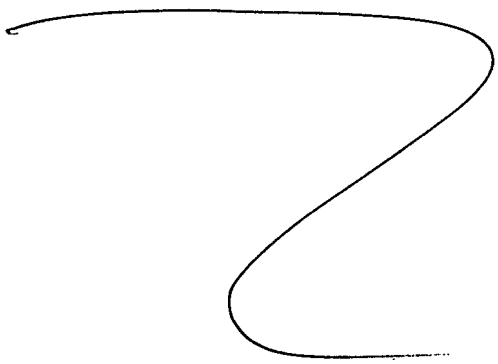
Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kibrom K. Gebresilassie whose telephone number is 571-272-8571. The examiner can normally be reached on 8:00 am - 4:30 pm Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kamini Shah can be reached on 571-272-2279. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

KG

HUGH JONES Ph.D.
PRIMARY PATENT EXAMINER
TECHNOLOGY CENTER 2100

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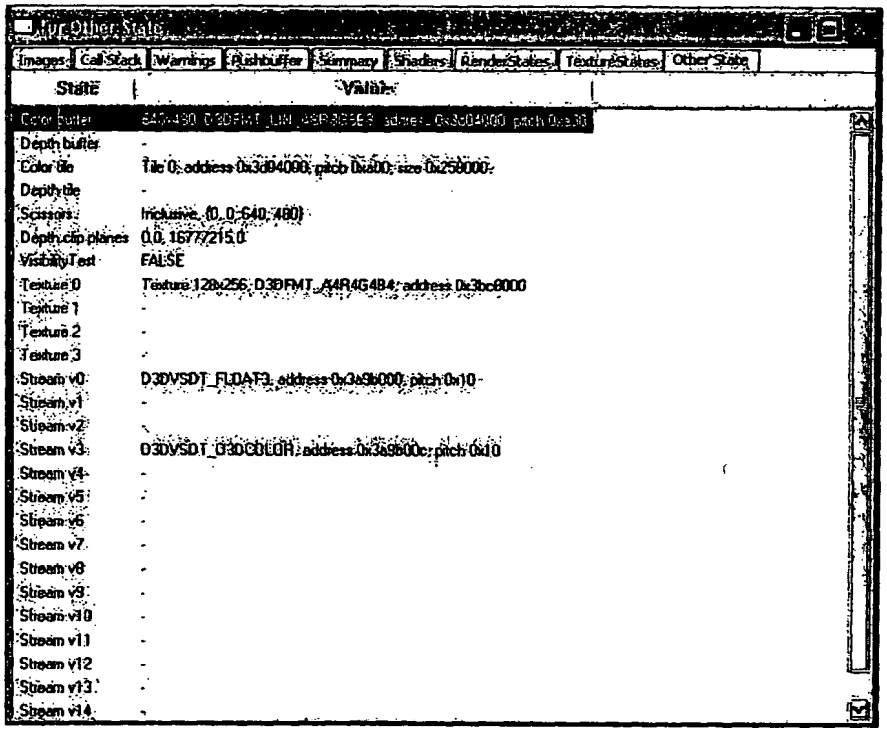
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Summary
Shaders
RenderStates
TextureStates
Other State
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Value
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Color tile
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Scissors
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Depth clip planes
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Texture 1
Texture 2
Texture 3
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Stream v2
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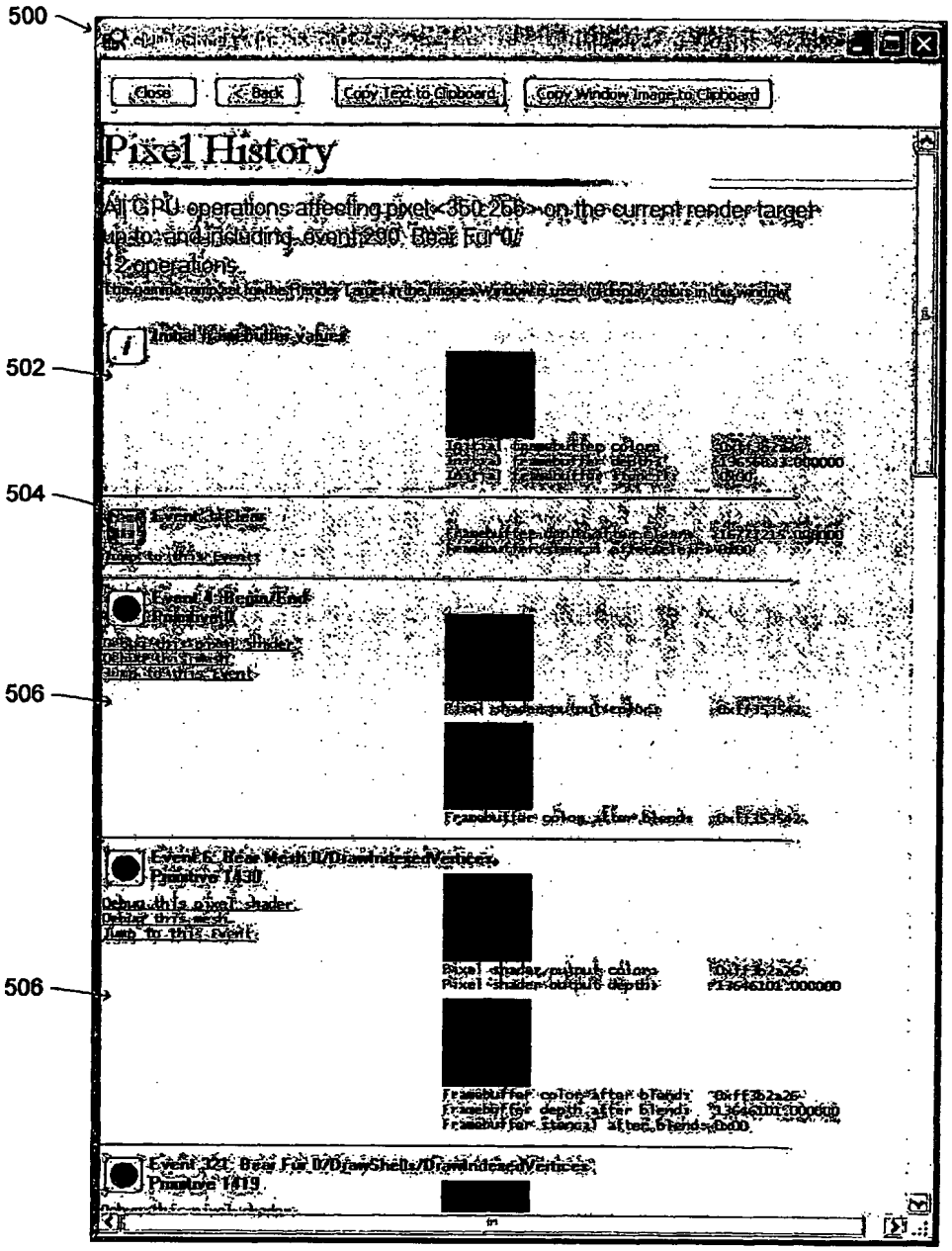
Stream v14

Fig. 23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Pixel History
All GPU operations affecting pixel <350, 266> on the current render target
up to and including event 290: Beat Fur 0
12 operations
502
504
506
506

Fig. 24